CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Management Comments and Recommendations

For the Year Ended June 30, 2010

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November 17, 2010

To the Finance Committee of the California Public Employees' Retirement System Sacramento, California

In planning and performing our audit of the financial statements of the California Public Employees' Retirement System (the System or CalPERS) as of and for the year ended June 30, 2010, in accordance with auditing standards generally accepted in the United States of America, we considered CalPERS' internal control over financial reporting (internal control) as a basis for designing our auditing procedures for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of CalPERS' internal control. Accordingly, we do not express an opinion on the effectiveness of the CalPERS' internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A material weakness is a deficiency, or combination of deficiencies in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis.

Our consideration of internal control was for the limited purpose described in the first paragraph and was not designed to identify all deficiencies in internal control that might be significant deficiencies or material weaknesses and, therefore, there can be no assurance that all such deficiencies have been identified. We did not identify any deficiencies in internal control that we consider to be material weaknesses.

However, during our current and prior audits, we became aware of several matters that are opportunities for strengthening internal controls and operating efficiency. The current year comments are included in the Management Comments and Recommendations section of this report. The status of prior year comments is included in the Status of Prior Years Comments and Recommendations section of this report.

We would like to thank CalPERS' management and staff for the courtesy and cooperation extended to us during the course of our engagement.

The accompanying management comments and recommendations and status of prior years comments and recommendations are intended solely for the information and use of management, the Board of Administration, and others within CalPERS and are not intended to be and should not be used by anyone other than these specified parties.

Certified Public Accountants

Sacramento, California November 17, 2010

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Management Comments and Recommendations For the Year Ended June 30, 2010

Fiscal Year 2009/2010 Observation #1 – Recognition of Multi-year Contract Expenses

During the fiscal year 2009/2010, CalPERS recorded certain expenses in the general ledger based on the encumbrance of multi-year contract amounts, which resulted in the recognition of expenses that had not yet been incurred. Expenses should be recorded in the fiscal year in which the related goods are received or services are rendered, regardless of the timing of contract authorization, in accordance with generally accepted accounting principles (GAAP). As of June 30, 2010, CalPERS' personnel analyzed expenses greater than \$100,000, by budget line item; expenses that had not yet been incurred were manually reversed out of the general ledger. While the current methodology assures that the financial statements fairly present, in all material respects, multi-year contract expenses, the process results in the following deficiencies:

- a. There is a risk that expenses less than \$100,000, by budget line item, are not recorded in the proper fiscal year in accordance with GAAP.
- b. The process is inefficient as personnel were required to investigate the recorded multiyear contract expense amounts and manually correct certain amounts that were improperly recognized during the fiscal year.
- c. Expenses reported in the Statement of Changes in Fiduciary Net Assets and supplemental Administrative Expenses Schedule had to be corrected for financial reporting purposes.

CalPERS should implement a process to ensure that multi-year contract expenses are reported in the proper period. Multi-year contract expenses should be recorded in the general ledger as the related goods are received or services are rendered.

Management Response:

Fiscal Services concurs with the recommendations. Although we currently have a process to address multi-year contract expenses to ensure that CalPERS' financial statements are fairly presented, we will explore alternative processes which meet CalPERS' GAAP and budget-based reporting requirements. In addition, Fiscal Services will modify and refine the current procedure to address the deficiencies noted above and ensure that accruals and expenses for multi-year contracts are properly recorded. Fiscal Services expects to complete this by September 30, 2011.

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM Management Comments and Recommendations (Continued) For the Year Ended June 30, 2010

Fiscal Year 2009/2010 Observation #2 – Executive Review of Draft Financial Statements

There is currently no process in place to ensure that all CalPERS executives have an opportunity to review the draft financial statements prior to the Finance Committee's approval of the financial statements. Representatives from each of CalPERS' divisions and offices should have an opportunity to review the draft financial statements to ensure proper reporting and disclosure of CalPERS' unique activities and services.

We strongly encourage the Fiscal Services Division to distribute the draft financial statements to the appropriate executive personnel for review prior the Finance Committee's approval of the financial statements. We further recommend that Fiscal Services develop a process to review and respond to the comments and suggestions made by executive personnel to ensure that CalPERS' financial statements offer readers the most thorough and transparent view of CalPERS' financial activities and transactions.

Management Response:

Fiscal Services concurs with the recommendations. In the past, the draft basic financial statements have been reviewed by a limited number of management. Going forward, Fiscal Services will ensure that the draft basic financial statements will be circulated among key executives and appropriate personnel for review and comment at an earlier date during our normal review process. In doing so, any concerns or comments from executives and appropriate personnel can be addressed prior to the presentation of the draft basic financial statements to the Finance Committee. Fiscal Services expects to complete this by September 30, 2011.

CALIFORNIA EMPLOYERS' RETIREMENT BENEFITS TRUST FUND (CERBTF)

Fiscal Year 2008/2009 Observation #1 - CERBTF Contributions and Distributions

During our audit, we determined that premium payments made by participating employers outside of the CERBTF were not reported in the financial statements as required by generally accepted accounting principles (GAAP). The Governmental Accounting Standards Board recently provided clarification and guidance which requires the reporting of payments made outside of the trust as both contributions toward the annual required contribution and as distributions from the trust. For the fiscal year 2008-09, an audit adjustment of approximately \$228 million was recorded to reflect contributions and distributions made outside of the CERBTF as required by GAAP. Current policy allows employers to offset premium payments made outside of the trust against the employers' required contributions to the trust. The policy does not address how the employers should report those payments to the System. In fiscal year 2008-09, the CERBTF Compliance and Reporting Unit requested contribution and distribution information from all participating employers via email. However, responses were not received from all employers and the transactions originally were not reflected in the financial statements.

We recommend that the System enhance existing policies and procedures to gather the contributions and distributions data from participating employers. In the limited instances in which the employers do not provide the requested data, the System should develop a process to estimate premium payments made outside of the CERBTF. As part of the enhanced policy, the System should consider requiring annual certification of the annual required contribution (ARC), premiums paid outside of the CERBTF and the net contribution made from all participating employers. Fiscal Services should work with the Compliance and Reporting unit to record the transactions in the general ledger as they are reported to the System by employers. In addition, we recommend that the Office of Audit Services consider examining amounts reported by participating employers on a risk-based, periodic basis. The examination should be designed to determine that CERBTF disbursements reported by participating employers comply with the policies outlined in the System's CERBTF Prefunding Plan.

Management Response:

The CERBTF Compliance and Reporting Unit concurs and will enhance policies and procedures to collect contributions and distributions from participating employers and review the process with the auditors. The Compliance and Reporting unit will strengthen the process to obtain annual certification of ARC premiums paid outside of the CERBTF and net contributions made from all participating employers. The CERBTF Compliance and Reporting Unit expects to complete this item by February 1, 2010.

The CERBTF Compliance and Reporting Unit and the Office of Audit Services (OFAS) concur and will work to develop a risk based approach to examine on a periodic basis if CERBTF employers comply with the System policies outlined in the CERBT Prefunding Plan. OFAS expects to complete this item by June 30, 2010.

Fiscal Year 2008/2009 Observation #1 - CERBTF Contributions and Distributions (Continued)

Current Year Status:

The recommendation has been implemented.

Fiscal Year 2008/2009 Observation #2 - CERBTF Actuarial Valuations

Employers participating in the CERBTF engage third-party actuaries to perform other post-employment benefits (OPEB) valuations in accordance with the CalPERS *OPEB Assumption Model*. The System's actuaries review each valuation for compliance with the CalPERS OPEB Assumption Model; however, current procedures do not include an independent review of the underlying participant data used by the third-party actuaries. Errors in member data may distort valuation results and lead to improper determinations of actuarial accrued liabilities and annual required contributions.

We recommend that the Office of Audit Services perform risk-based, periodic tests of participant data used by the third-party actuaries. The tests should be designed to determine that participant data used in the actuarial valuations is consistent with the participating employers' official records.

Management Response:

The Office of Audit Services (OFAS) agrees with the recommendation to perform periodic audit tests of the participant data used in OPEB valuations provided by employers who participate in the CERBT. OFAS expects to complete this item by June 30, 2011.

OFAS will research the feasibility of performing a risk-based periodic test of participant data used by third party actuaries. OFAS expects to complete this item by June 30, 2010.

Current Year Status:

OFAS completed the evaluation and selected a sample of public agencies for risk-based periodic testing. OFAS is in the process of performing tests of participant data used in OPEB valuations provided by the employers who participate in the CERBT. OFAS expects to complete by June 30, 2011.

HEALTH CARE FUND (HCF)

Fiscal Year 2008/2009 Observation #3 - Claims Processing

The System has contracted with third-party administrators to service the claims of its health plans and prescription drug program. Service agreements stipulate that claims must be submitted to the third-party administrators within 15 months and 12 months of the related service, for health plan claims and prescription drug claims, respectively. During our testing of HCF claim payments, we determined that claim submissions often represented services rendered beyond the time frame specified in the respective third-party service agreements.

We recommend that the System evaluate whether the claim submission time frames established in the service agreements are reasonable based on the current operating environment. Service agreements should be enforced or revised accordingly. We further recommend that management, with the assistance of the service providers, determine whether procedures can be enhanced to improve the timeliness of claim submissions. Timely claim submissions are essential for the System to manage its cash flows and ensure compliance with the service agreements.

Management Response:

The Health Benefits Branch concurs and by July 1, 2010, will evaluate whether the claim submission time frames established in the service agreements are reasonable based on the current operating environment. The original parameters were set in place at the origination of the existing contracts, and will be reviewed to ensure that they continue to meet the CalPERS program needs.

Current Year Status:

The recommendation has been implemented.

INVESTMENT ACCOUNTING

Fiscal Year 2008/2009 Observation #4 - Real Estate Appraisals

Properties held in separate account real estate partnerships are valued based on third-party appraisals directed by the System. Appraised values are adjusted by the general partner to reflect changes in fair value between the appraisal date and the end of the System's financial reporting period. The System's real estate Performance Monitoring Unit (PMU) is responsible for ensuring appraised property values are properly recorded by the partnerships in accordance with the System's Investment Policy for Real Estate Accounting. During our testing of real estate partnership investments, we noted the following:

Fiscal Year 2008/2009 Observation #4 - Real Estate Appraisals (Continued)

- The PMU faces significant challenges in performing the task of verifying that appraised values are being properly reflected in the partnerships' financial statements in a timely manner as there were approximately 1,600 individual properties appraised in fiscal year 2008-09 and only one staff was assigned to perform this function.
- Certain general partners report to the System at the aggregate or fund level rather than the individual property level. In some instances, it was difficult to verify that the appraised values were reflected by the partnerships as property-level financial information is not provided by all general partners.
- Appraisals are completed throughout the fiscal year; however there is no process in place to evaluate the changes in fair value from the appraisal date to the System's fiscal year-end.

The System should enhance the current processes by employing the following recommendations:

- 1. Assign the appropriate number of personnel to verify that appraised property values are recorded by the partnerships.
- 2. Require separate account general partners to provide financial information at the underlying property level to facilitate the appraisal verification process.
- 3. For separate account real estate partnerships that were not appraised as of the System's fiscal year-end, review the partnerships' June 30 financial information to ensure significant changes in fair value are properly reflected in the partnerships' June 30 financial statements.

Management Response:

The Investment Office (INVO) concurs with the MGO recommendations and will enhance the following current processes by June 30, 2012:

- 1. At this point, INVO has not requested additional positions to verify the appraised property values recorded by the partnerships in their quarterly financial statements. INVO will examine its current staffing to determine if positions could be redirected from other INVO functions to perform this role.
- 2. The new Automated Real Estate Information System (AREIS) will provide the structure for reporting the financial information at the underlying property level. The System is currently in its final stage of implementation. Real Estate general partners should have the ability to report at the property level starting with the 2010-11 Fiscal Year.
- 3. The INVO, Operations, Performance and Technology Division has recently instituted a new process where they now value CalPERS interests (required by the Appraisal of CalPERS Interests Policy) no more than five (5) months prior to June 30 of every year. This allows for no appraisal value of CalPERS interests to be more than 5 months old when provided as part of the year end financials.

Fiscal Year 2008/2009 Observation #4 - Real Estate Appraisals (Continued)

Current Year Status:

- 1. Although one staff continued to perform the function of verifying that appraised values are properly reflected in the partnerships' financial statements, the number of properties verified at the time of the audit has significantly increased compared to fiscal year 2008-09. CalPERS personnel discussed, with the respective partners, the reasons for variances between appraised values and the partnerships' financial statements, however, we noted CalPERS currently does not have a formal documented policy for following up with the partners in addressing and resolving variances. We recommend that INVO enhance this process by establishing a threshold for investigating variances between the appraisals and partnerships' financial statements. Any variances meeting the threshold should be investigated, resolved and documented in the reconciliation.
- 2. In fiscal year 2009-10, AREIS was not fully implemented and this recommendation is anticipated to be implemented in fiscal year 2010-11. As AREIS is fully implemented in the future, CalPERS should enhance the following processes:
 - a. Ensure real estate partners provide financial information at the underlying property level for all partnerships in which CalPERS holds a majority effective ownership interest.
 - b. Establish a process to specify the responsible party who will be inputting CalPERS' effective ownership percentage within AREIS.
 - c. Because INVO personnel utilize CalPERS' effective ownership percentage from AREIS in verifying that the appraised values are properly reflected in the partnerships' financial statements; CalPERS' effective ownership percentage should be validated by appropriate personnel who possess sufficient knowledge of the partnership agreement and structure. Furthermore, CalPERS' effective ownership percentage should be periodically reviewed and updated by appropriate personnel.
- 3. For properties that were not appraised as of CalPERS' June 30th fiscal year-end, INVO should continue to evaluate whether significant changes in fair value between the most recent appraisal and the partners' June 30th financial statements are reasonable given known facts and conditions such as the real estate industry and market conditions. CalPERS should also develop a formal documented process including a tolerance threshold for evaluating changes in fair value. This process should be performed for real estate partnerships in which CalPERS holds a majority effective ownership interest.

Current Year Management Response:

INVO concurs with the recommendations and will enhance the following processes with target completion date on June 30, 2012:

- INVO Operations, Performance and Technology Division (OPTD) Performance Monitoring Unit (PMU) shall expand the current documented procedures for the reconciliation process of appraised values to include a threshold for investigating variances between the appraisals and partnerships financial statements. The process will provide detailed guidelines to determine if the variance should be investigated, resolved and documented.
- 2. INVO will enhance the following processes:
 - a) AREIS provides the structure for reporting financial information at the underlying property level. Although the Real Estate general partners have the ability to report at the property level, not all partners are contractually required to do so. INVO will include provisions in all new majority-interest partnerships formed, to include a requirement to provide property level financial statements when it is in the best interest of the fund. In addition, INVO will work with its current majority-interest partnerships to request that they provide property level financial statements when it is in the best interest of the fund.
 - b) INVO shall establish a process to specify the responsible party for providing CalPERS effective ownership percentage within AREIS.
 - c) INVO shall establish a process to ensure the CalPERS effective ownership percentage is validated by appropriate personnel and is periodically reviewed and updated by appropriate personnel.
- 3. INVO-OPTD-PMU shall develop a formal documented process to review the fair values contained in the financial statements on fiscal year end June 30th. The process shall include a risk tolerance threshold for evaluating any change in fair value since the last appraisal. The process should be performed for real estate partnerships in which CalPERS holds a majority effective ownership interest.

Fiscal Year 2008/2009 Observation #5 - Accounting and Reporting Unitized Investments

We observed that internally pooled (unitized) investments are allocated to participating funds based on the net asset value (NAV) of the unitized portfolios. NAV is equivalent to the price per share of the internal pool and reflects the fair value of the underlying investments adjusted for related investment receivables and payables. Reporting unitized investments at NAV may result in the misclassification of investment fair values and the related investment receivables, payables, income and expenses transactions.

We recommend that Fiscal Services Division, Investment Accounting Unit, separately allocate the fair value of unitized investments, receivables and payables for financial reporting purposes. Each fund's share of the fair value of unitized investments should be reported as part of the appropriate asset class. The allocated receivables and payables should be reported within the respective asset and liability line items in the financial statements.

Management Response:

Fiscal Services Division (FCSD) concurs with the recommendation. State Street Bank (SSB) will continue to provide a monthly feed of transactions for the PeopleSoft General Ledger update each month. SSB provides FCSD with ownership percentages for all pools which own a portion of an underlying fund. FCSD will apply these percentages to the fund level trial balances and prepare a journal entry to correctly report the fair value of investments, receivables and payables, as well as investment related income and expenses.

FCSD will establish this manual process in fiscal year 2009-10 to correctly classify all financial information. FCSD and SSB will work together to automate this process and expect to complete it by September 2011.

Current Year Status:

The recommendation has been implemented.

ACCOUNTING AND FINANCIAL REPORTING POLICIES

<u>Fiscal Year 2008/2009 Observation #6 - Evaluation of Accounting Issues and Unique Transactions</u>

During our audit, we identified material loans and investment purchases associated with the Federal Reserve's Term Asset-Backed Security Loan Facilities (TALF) Program that were not properly recorded. Current accounting practices do not prescribe specific procedures to identify, research and document unique transactions and accounting issues. As a result, there were inefficiencies in the audit process and material adjustments to the financial statements.

Fiscal Year 2008/2009 Observation #6 - Evaluation of Accounting Issues and Unique Transactions (Continued)

We recommend that Fiscal Services should work with other Divisions and Branches within the System to establish a process for identifying and properly accounting for new or unique transactions. The process should include formal documentation of the issue, pertinent background information, relevant legal and/or accounting guidance and the conclusions reached. The documentation should be prepared by staff with sufficient experience and reviewed by appropriate management personnel. Formal documentation will reduce staff and audit inefficiencies and ensure that transactions are properly and consistently reported in the financial statements.

Management Response:

Fiscal Services Division (FCSD) concurs with the recommendation. FCSD will pursue various avenues of communications to try to incorporate the various programs within the enterprise. This will include meetings with the various Divisions and Branches through the Financial Reporting Committee to assist in identifying new accounting treatments or unique transactions. FCSD will develop specific procedures to research, and document unique transactions and/or accounting issues. At the latest, this recommendation is expected to be completed by September 2010.

Current Year Status:

The recommendation has been implemented.

<u>Fiscal Year 2008/2009 Observation #7 - Implementation of New Accounting and Financial Reporting Standards</u>

The System is required to implement GASB Statement No. 51, Accounting and Financial Reporting for Intangible Assets and Statement No. 53, Accounting and Financial Reporting for Derivative Instruments for the fiscal year ended June 30, 2010.

GASB Statement No. 51 defines intangible asset as an asset that lacks physical substance, is non-financial in nature, and has an initial useful live extending beyond a single reporting period. The standard requires that qualifying intangible assets such as computer software, be reported as capital assets, and provides specific guidance on recognizing internally generated computer software. Accounting for the costs associated with the Pension System Resumption (PSR) and other projects should be evaluated in accordance with GASB Statement No. 51, and the System should establish policies for the capitalization and depreciation of intangible assets, as applicable.

<u>Fiscal Year 2008/2009 Observation #7 - Implementation of New Accounting and Financial Reporting Standards (Continued)</u>

GASB Statement No. 53 provides guidance regarding the accounting and reporting of derivative instruments, including hedge transactions. Changes in the fair value of hedging derivative instruments will be reported as deferrals in the statement of plan net assets. Changes in the fair value of derivative instruments that do not meet the criteria for an effective hedge or are associated with investments that are already reported at fair value are recognized as investment income in the current period reporting. The System will need to determine the nature and extent of derivative investments to properly apply the provisions of GASB Statement No. 53.

We recommend that the System develop a work plan for the implementation of new accounting and financial reporting standards. An effective work plan should include the following essential elements:

- assign staff with sufficient experience to evaluate the new standards and determine the applicability to the System,
- identify key personnel and data needed for the implementation,
- establish a timeline for the implementation,
- provide training to key personnel throughout the System,
- apply the new standards to interim data.
- document the relevant provisions and the conclusions reached in a formal memorandum,
- draft revisions to the financial statements for management's and the external auditor's review

Management Response:

Fiscal Services Division (FCSD) concurs with the recommendation. FCSD will work with management and staff in the impacted program accounting units and other affected divisions within CalPERS to develop an effective work plan for implementation of GASB Statement Nos. 51 and 53. At the latest, this recommendation is expected to be completed by September 2010.

Current Year Status:

The recommendation has been implemented.

FINANCIAL REPORTING

Fiscal Year 2007/2008 Observation #6 – Investment Disclosures

Fiscal Services utilizes investment data provided by the custodian bank to prepare the financial statement disclosures required by Governmental Accounting Standards Board (GASB) Statement No. 40, Deposit and Investment Risk Disclosures – an amendment of GASB Statement No. 3. Our audit procedures revealed numerous errors and inconsistencies in the disclosures, as Fiscal Services did not independently verify whether the amounts provided by the custodian bank were accurate or in conformity with the provisions of GASB Statement No. 40. The original data provided by the custodian bank had a variance of approximately \$6 billion which was subsequently addressed and the appropriate data was included in the CalPERS financial statements. Furthermore, Fiscal Services did not ensure that the custodian bank provided the underlying data in a timely manner, which created challenges in meeting the audit deadline.

We also discovered errors in the financial statement disclosure of unfunded alternative investment commitments. Certain amounts provided by CalPERS' third party service provider did not agree to information provided by the partners. Although the disclosed amounts were corrected, Fiscal Services did not independently corroborate the unfunded commitments in preparing the financial statement disclosure.

We recommend that Fiscal Services reconcile GASB Statement No. 40 investment data provided by the custodian bank with the general ledger to validate the accuracy and completeness of the data. Fiscal Services should also perform procedures to ensure the conformity of the related disclosures with GAAP reporting requirements. Deadlines should be clearly established with the custodian to allow sufficient time for internal review and external audit procedures. We further recommend that Fiscal Services compare unfunded alternative investment commitment amounts provided by the third party service provider to the related partnership financial statements to determine that amounts are complete and calculated correctly.

Management Response:

Fiscal Services concurs with the recommendation. Fiscal Services will reconcile GASB Statement No. 40 investment data to the general ledger and will follow up on any discrepancies with the custodian bank. Fiscal Services will also develop and perform procedures to ensure the conformity of the related disclosures with GAAP reporting requirements.

Fiscal Services implemented a quarterly reconciliation process in fiscal year 2008-09 to compare the unfunded amounts reported by the general partner with those reported by PrivateEdge, third party service provider. The reconciliation will be reviewed to determine that the amounts are complete and calculated correctly and any discrepancies noted are brought to the attention of PrivateEdge for explanation or correction.

Fiscal Year 2007/2008 Observation #6 – Investment Disclosures (Continued)

Furthermore, Fiscal Services will work with the Investment Office, who manages the contracts for both the service provider and master custodian, to improve the reports provided by the service provider to be in accordance with GAAP guidelines.

Fiscal Year 2008/2009 Status:

A process was implemented to reconcile the GASB Statement No. 40 investment data; however Fiscal Services should continue to perform procedures to ensure the conformity of the related disclosures with GAAP reporting requirements. The recommendation relating to alternative investment unfunded commitment amounts has been implemented.

Fiscal Year 2009/2010 Status:

The recommendation has been implemented.

Fiscal Year 2007/2008 Observation #8 - Evaluation of Contingencies

Our audit procedures include inquiries of CalPERS' general counsel as well as outside attorneys regarding pending litigation, claims and assessments. GAAP requires that contingent losses be accrued for matters in which a material loss is probable and reasonably estimable. If both of these conditions have not been met, contingent losses must be disclosed when it is at least reasonably possible that a loss may have been incurred. In the attorneys' responses, we identified a contingent loss that was not properly disclosed in the draft financial statements. Although Fiscal Services updated the note disclosures to reflect the contingency, current procedures are not sufficient to ensure that contingencies will be accrued or disclosed in accordance with GAAP.

We recommend that Fiscal Services meet with CalPERS' general counsel to identify pending litigation, claims and assessments in conjunction with the preparation of the annual financial statements. In addition, Fiscal Services should review all legal responses to the auditor's inquiries and determine whether matters must be accrued or disclosed in the financial statements.

Management Response:

Fiscal Services concurs with the recommendation. Fiscal Services will coordinate efforts with CalPERS' General Counsel to develop a process where Fiscal Services will be notified of pending litigation, claims and assessments in conjunction with the preparation of the annual financial statements. In addition, Fiscal Services will review the responses to the auditor's inquiries provided by CalPERS' Legal Office as well as outside attorneys and determine whether there are material items which must be accrued or disclosed in the financial statements.

Fiscal Year 2007/2008 Observation #8 - Evaluation of Contingencies (Continued)

Fiscal Year 2008/2009 Status:

Fiscal Services met with CalPERS' general counsel to identify pending litigation, claims and assessments in conjunction with the preparation of the annual financial statements. However, Fiscal Services should continue to review all pending litigation, claims and assessments reported to the independent auditor by CalPERS' general counsel and should properly reflect matters that must be accrued or disclosed in the financial statements.

Fiscal Year 2009/2010 Status:

The recommendation has been implemented.

Fiscal Year 2007/2008 Observation #9 - Management's Discussion and Analysis

Fiscal Services prepares management's discussion and analysis (MD&A), which includes a discussion of the reasons for changes in financial position and results of operations in the current year compared to the prior year. MD&A prepared by Fiscal Services meets the minimum GAAP requirements; however, we believe incorporating the unique perspectives of the managers responsible for key activities would enhance the usefulness and improve the users' understanding of the financial statements. Appropriate personnel in the Investment Office, Benefit Services Division, and Health Benefits Branch, at a minimum, should be involved in the preparation of MD&A and should provide the reasons for changes and known facts, conditions, or decisions that are expected to have a significant effect on the financial position or results of operations.

We recommend that Fiscal Services obtain narrative explanations of the significant changes in financial position and results of operation from management responsible for the related activities. Fiscal Services should be heavily involved in the analysis to ensure compliance with the financial reporting standards and to avoid redundancy in the MD&A.

Management Response:

Fiscal Services concurs with the recommendation. Fiscal Services will lead the CalPERS Financial Reporting Committee to meet these objectives. The Committee is attended by representatives from each Branch, the Office of Audit Services, and the Assistant Executive Officer of the Administrative Services Branch to discuss financial reporting enhancements and the implication of program changes on financial reporting. As the coordinator and facilitator for the Committee, Fiscal Services will add this observation to the agenda of the next CalPERS Financial Reporting Committee. Key individuals, who will provide the narrative, will be identified and provided with guidelines for developing explanations of significant changes in financial position and results of operations that conform to the GASB 34 directives, which establishes the financial reporting standards for the MD&A of state and local governments.

<u>Fiscal Year 2007/2008 Observation #9 - Management's Discussion and Analysis (Continued)</u>

Fiscal Year 2008/2009 Status:

In fiscal year 2008/2009, Fiscal Services met with representatives from each Branch to enhance the MD&A. Fiscal Services should continue this process to ensure MD&A incorporates the reasons for changes and known facts, conditions, or decisions that are expected to have a significant effect on the financial position or results of operations.

Fiscal Year 2009/2010 Status:

The recommendation has been implemented.

ELECTRONIC DATA PROCESSING PASSWORD POLICY

Fiscal Year 2007/2008 Observation #13

During our review of electronic data processing policies, we found that password requirements used to access the mainframe applications, RIBS and CRS, currently do not fully adhere to CalPERS' Information Security Identity Authentication Practice in the following areas:

Configuration	Mainframe Settings	I.S. Identity Authentication Practice
Password length	6-8 characters	8 characters
Minimum password age	0	1 day
Password Complexity	not required	complex passwords required

We recommend CalPERS' mainframe administrator should update the Resource Access Control Facility (RACF) security settings to ensure that the settings comply with the Information Security Identity Authentication Practice. The Information Security Office should conduct periodic monitoring to ensure compliance.

Management Response:

The Enterprise Mainframe Service Support Team (the Team) agrees with the finding and recommendation. The mainframe RACF administrators and Enterprise Mainframe Server Support technical staff will update the RACF security settings to insure that they comply with the ISOF Identity Authentication Practice. The Team plans to start this effort immediately after the upgrade of our mainframe operating system that is being implemented on September 28, 2008. The planned target completion date is January 31, 2009.

Fiscal Year 2007/2008 Observation #13 (Continued)

Fiscal Year 2008/2009 Status:

The prior year recommendation is in the process of being implemented. With the development and implementation of PSR, it was decided that no further updates to the current legacy applications would take place. As a result, the password configuration requirements were not updated to be in compliance with the I.S. Identity Authentication Practice. This recommendation, however, will be addressed with the PSR system implementation, which is scheduled for September 2010 and will replace the mainframe applications, RIBS and CRS.

Fiscal Year 2009/2010 Status:

The prior year's recommendation remains in process of being addressed. All updates to the current legacy applications, including RIBS and CRS have ceased. As a result, this recommendation will not be fully addressed until the PSR implementation which has been postponed to September 2011.

GENERAL CONTROLS - ELECTRONIC DATA PROCESSING

Information Technology Agency Level Controls

Fiscal Year 2006/2007 Observation #14

CalPERS policies state that all newly-hired employees will review the CalPERS Information Security Policies and Practices and sign an Information Systems Security and Confidentiality Acknowledgement (ISSACA) form. In addition, all current employees will review and re-sign the form yearly. The form states, among other items, that the employee agrees to abide by CalPERS information systems requirements including the understanding that:

- CalPERS information assets and computer resources only for CalPERS approved purposes.
- Employees are to access CalPERS systems and networks using only my assigned user identifiers and passwords.
- Employees are to notify the CalPERS Information Security Officer immediately of any actual or attempted security violations including unauthorized access; and, theft, destruction, or misuse of systems equipment, software, or data.

While CalPERS policy is that all new-hires complete and sign the ISSACA form and current employees re-sign the form yearly, we found that evidence of the signed forms are not always maintained. Our testing of 18 new-hire forms found that 17 percent could not be found. In addition, we tested six current ITSB employees and were only able to find four completed forms.

Fiscal Year 2006/2007 Observation #14 (Continued)

The lack of available signed forms could indicate that either the employee did not complete the review and subsequently sign the form, or that the form had been misplaced.

In either case, the evidence of completion of the form is not available putting the agency at increased risk for non-compliance to the information security policies and practices.

In addition, CalPERS has performed an IT risk self-assessment documenting the organizational and management practices, personnel practices, data security practices, information integrity practices, software integrity practices, personal computer security practices, network protection practices and incident response practices. These practice areas were rated with an overall risk score derived from a probability, impact and mitigation control assessment score. The documentation was not readily available to support the effectiveness of the mitigating controls noted in the report. It is these mitigation controls that address the vulnerabilities of the agency and which should be assessed for effectiveness.

Recommendations:

- 1. CalPERS ISOF (Information Security Office) should institute new procedures to ensure that training is provided and new-hires sign the ISSACA form. Periodic internal reviews should be accomplished to ensure this is being done. In addition, procedures should be implemented to ensure that recurring training is accomplished and the recurring ISSACA form is signed and submitted to the Human Resources Department.
- 2. While an IT risk self-assessment has been performed and is an appropriate step in the development of a comprehensive risk assessment strategy for the agency, the ITSB Technology Services and Support Division should consider the documentation and testing of the mitigation controls noted within the current self-assessment. The effectiveness of the mitigation controls should be established and documented in order to substantiate the mitigation control score used within the risk self-assessment.

Management Response:

 Management concurs with this recommendation. CalPERS Information Security Office (ISOF) has implemented an annual mandatory web-based training (WBT) program that replaces the ISSACA process. This program ensures that all staff, including civil service employees, retired annuitants and student assistants, have been informed, through the WBT, of the CalPERS information security policies and practices, and captures their acknowledgement of and agreement to abide by, the same.

The WBT process creates a file consisting of the identity and date of everybody who has taken the training. This file is used as a compliance monitoring tool, in lieu of reviewing individual employees' personnel files looking for the most recent ISSACA forms.

Fiscal Year 2006/2007 Observation #14 (Continued)

Management Response (Continued):

The Division Chief of the Information Technology Administration Division (ITAD) has taken the following steps to mitigate issues within the Information Technology Services Branch (ITSB):

- A notice to all ITSB staff was distributed requesting an ISSACA form be reviewed and signed by all employees. ITAD staff is in the process of tracking and monitoring the forms received to ensure all forms are accounted for.
- All ITAD staff that process badge requests have been made aware and instructed to
 follow the policy and procedures documented in the ITSB Policy and Procedures
 Manual which states that a signed ISSACA form must be attached to the Badge
 Access Card Request form for new ITSB State employees, student assistants, retired
 annuitants, contractors, and consultants.
- The ITAD staff is aware that each ITSB employee is required to review and sign a
 form annually as stated in the ISSACA Practice. ITAD staff have developed
 processes to ensure each employee is instructed to review and sign a form annually as
 stated in the ISSACA Practice. ITAD staff will also ensure the forms are received
 and forwarded to Human Resources.
- In addition, ITAD will share this finding and recommendation with the CalPERS Information Security Office to ensure that all recommended actions to resolve this issue are implemented and coordinated as needed.
- 2. Management concurs with this recommendation. ISOF owns and oversees the CalPERS security risk assessment process. ISOF has implemented RAMP (Risk Assessment and Management Program) to assess, measure, report, recommend remediation, and track implementation of those remediation on a biennial cycle, as defined in the State Administrative Manual (SAM). RAMP consists of three main activities: 1 structured interviews based on the RiskWatch methodology and tools; 2- document and artifact assessment; and 3- Certification and Accreditation of all new projects prior to implementation. Self-assessments, such as the one that ITSB conducted earlier this year, are not part of RAMP. Self-assessments are a good approach for an organization to take to identify and remediate issues, but do not replace the need for the independent assessment activity represented by RAMP.

Fiscal Year 2006/2007 Observation #14 (Continued)

Fiscal Year 2007/2008 Status:

1. The prior year recommendation is in the process of being implemented. Annual web-based training has been instituted to replace the previous ISSACA processes. Our testing in the current year found that approximately 13 percent of our sample of new hires had not completed the on-line training. Additionally, our testing of current ITSB employees found that approximately 14 percent of our sample had not accomplished their yearly refresher training. Current CalPERS standards are not specific as to the timeframe in which training will be completed for either new hires or current employees accomplishing yearly refresher training.

The CalPERS Information Security Office (ISOF) should develop standards and procedures to ensure that new-hire web-based training is accomplished within a reasonable timeframe after an employee's start date. Likewise, the timeframe by which current employees should complete their yearly refresher training should be defined.

The Information Security Office (ISOF) will establish policies and procedures to ensure that all new employees are identified and awareness training is scheduled for them in a timely manner. The timeframe for current employees to complete the annual training will be determined. The ISOF's goal is to coordinate with the Learning Management System (initially implemented for PSR) to identify staff who have not taken the training. These policies or procedures should be completed by June 30, 2009.

2. The prior year recommendation has been implemented.

Fiscal Year 2008/2009 Status:

1. The recommendation continues to be in the process of being implemented. A new ISOF computer-based security training module has been developed for the Learning Management System (LMS) and is in process of being implemented. The original estimated completion date of June 2009 was pushed back due to staffing availability and other considerations.

In addition to managing the training, LMS will record when an employee, consultant, contractor, or intern has successfully completed the training. New employees will be added automatically to LMS from the PeopleSoft payroll system and will be required to complete the training within one week of being granted access to the CalPERS IT systems. Supervising managers will also be required to add contractors, retired annuitants, and student assistants into LMS. This will enable each staff member to be tracked individually to ensure that they have completed training each year, eliminating the need for the paper-based ISSACA form. After initial new-hire training, staff will be placed on a schedule for yearly training where individuals and their supervisors will be notified by email. LMS is expected to be fully implemented in November 2009.

Fiscal Year 2006/2007 Observation #14 (Continued)

Fiscal Year 2009/2010 Status:

1. The prior year recommendation has been implemented.

Access to Programs and Data

Fiscal Year 2006/2007 Observation #15

Network password configuration standards are not being enforced. The CalPERS Information Security Office has published a formal Information Security Password Practice policy, last updated in 2005. The policy defines a minimum password length and configuration standard. However, the CalPERS network is currently configured with Novell Network managing file and server access and Microsoft Active Directory managing all other network access. This dual separation of network control has resulted in the inability to electronically enforce a password configuration standard. CalPERS is aware of this inability and is currently in the process of moving all of the network control under Microsoft Active Directory. Until then, though, password configuration standards are not being electronically enforced.

While assignments to the Active Directory Domain, Schema, and Enterprise Administrative Groups are reviewed by the Windows Directory and Network Services (WNDS) manager to ensure that assignments to the groups are limited and appropriate for the employee's duties, there are no formal guidelines or policies defining who should formally have access to these Admins Groups within Active Directory. Without formal policies defining the positions and duties that would necessitate assignment to these sensitive authorization groups, it is left to personal discretion and institutional knowledge which may be subject to inconsistency depending upon who is ultimately authorizing the access.

CalPERS uses an in-house application, Movaris, to manage the workflow used to authorize user account access and authorizations to the various member benefits information systems; CRS, Comet, and RIBS. A review of the process, however, finds that the designated data owners or their formal designees as reported to the Information Security Office, are not required to provide formal authorization prior to a user being allowed access to the application or data. This has the potential to increase the risk associated with the disclosure or integrity of the data as the data owner is not the final approval authority granting access.

Shared accounts are being used by the database administrators when accessing the Oracle database or the VSAM file environment. The use of these shared accounts creates a situation wherein actions taken within the database system cannot be tracked back to a specific individual. Inadvertent or malicious activity may not be able to be positively associated with a specific individual essentially eliminating an effective audit trail.

Fiscal Year 2006/2007 Observation #15 (Continued)

Database administrator with accounts to the Oracle database or the VSAM environments may potentially have the capability to alter member information affecting benefits payments. Tests have not been conducted to determine if the database systems have sufficient logging triggers or oversight such as file balancing or reconciliations to verify if unauthorized changes can be detected.

Recommendations:

- 1. Until the CalPERS network environment is consolidated within Microsoft Active Directory, the Information Security Office should periodically run a password cracking application to test the complexity of network passwords. Individuals who are found to have used passwords that do not adhere to the CalPERS Password Practice policy should be notified to update their passwords immediately.
- 2. The CalPERS WNDS manager should develop and implement formal guidelines or policy defining which positions or duties should be allowed access to the Domain, Schema, or Enterprise Admins Groups within Microsoft Active Directory. This guideline or policy should ensure that only a minimal amount of personnel are allowed access and that the access is critical to the performance of their duties.
- 3. The CalPERS ITSB should work to ensure that the Movaris application process includes procedures for the formal data owner or the data owner designee to provide approval prior to granting access to an application or data under the responsibility of the data owner. Current user application accounts should also be reviewed by formal data owners to ensure that all accounts currently in use have the proper approvals.
- 4. CalPERS ITSB should evaluate the use of shared accounts and discontinue their use where it has been determined there is a risk to the database. Database administrator accounts with schema owner access should be controlled with access granted sparingly and only after proper approval has been granted.
- 5. The CalPERS ISOF should conduct testing to determine if persons with schema owner access to the Oracle database or to the VSAM files can make changes to the database that would affect member benefits without detection.

Fiscal Year 2006/2007 Observation #15 (Continued)

Management Response:

1. Management concurs with this recommendation. ISOF published the Identity Authentication Practice in March 2007 to sunset the Password and Shared ID Practices. CalPERS is aware of the inability to electronically enforce all requirements outlined in the Identity Authentication Practice due to the limitations of the technology and dual network control. However, CalPERS does electronically enforce mandatory change periods, password length, password history and system lockout requirements contained in the published practice. ITSB currently has a CalPERS project to migrate the Novell Network to the Microsoft Active Directory environment which will allow for greater password compliance. At the completion of the project the WNDS Unit manager will electronically enforce all of the Identity Authentication Practice requirements where possible.

ISOF provides awareness training and information regarding the importance of using "strong" passwords. This subject is covered at length in the annual mandatory security awareness training provided to all employees. It has been the subject of several email awareness messages published by the ISOF, the most recent of which was just three months ago. It is also covered in New Employee Orientation.

The ISOF will consider the possibility of implementing random password cracking as a compliance tool, after a thorough analysis is completed. This analysis will include a survey of other state departments' position on the use of password cracking for compliance purposes, best business practices, and industry standards.

- 2. Management concurs with this recommendation. The CalPERS WNDS Unit manager and Active Directory data owner will develop and implement formal procedures defining access to the defined Administrator Groups within Active Directory in accordance with the existing published Access Control and Data Ownership ISOF Policies. This effort will be completed by January 31, 2008.
- 3. Management concurs with this recommendation. IT Services Branch agrees that data owner approval should be obtained prior to granting system access; however, CalPERS Senior Leadership has determined that no modifications will be made to the Movaris application.

Movaris will be de-commissioned with the implementation of an Enterprise Identity and Access Management System (EIAM). EIAM will contain the data owner approval functionality.

Data owner approval is currently obtained for COMET requests through Movaris, but Movaris does not include that same functionality for RIBS and CRS. IT Services Branch is looking into the feasibility of running a monthly report of RIBS and CRS system users for the data owners to review and approve. While this process would be 'after the fact', it is a reasonable mitigation until CalPERS implements its Enterprise Identity Access Management System.

Fiscal Year 2006/2007 Observation #15 (Continued)

Management Response (Continued):

4. Management concurs with this recommendation. To address the shared accounts used to access VSAM files, Security Administration Services (SAS) will review all 'generic' and shared accounts and will work to bring them into compliance with the Identity Authentication Practice (see Observation 1.7 of the internal (FISMA) audit).

To address shared accounts used to access Oracle databases, a single schema owner account is required by the Oracle DBMS in order to create database objects (e.g. tables, indexes, primary keys). This single owner account owns the database objects. TSSD has an operational need to allow more than one DBA to use the schema owner account and access is granted only when necessary. To mitigate the risk, the ISOF is implementing the Guardium SQL Guard appliance. This appliance provides an audit trail and is outside the control of the DBA's. Logs created by the Guardium will be routinely evaluated by the ISOF to ensure no unauthorized activities, including database schema changes, occur. The testing and implementation of the Guardium should be completed by June 2008.

5. Management concurs with this recommendation. Controls should be in place to ensure modifications to schemas and any other changes to databases are recorded in non-reputable log files. The ISOF has purchased Guardium SQL event logging appliance to address this issue. During testing of the Guardium appliance, the Information Security Office will verify that Guardium appliance flags unauthorized activities performed by the database administrators (e.g. changing member information in the database that affects benefit payments.

The ISOF is also verifying VSAM logging processes and will expand its compliance program to include monitoring of event logs in VSAM environment to ensure timely identification of unauthorized database activities. Pending approval of the mid-year FBR, the compliance program will be in place by March 2008.

Fiscal Year 2007/2008 Status:

1. The prior year recommendation is in the process of being implemented. The CalPERS project to migrate the Novell Network to the Microsoft Active Directory (AD) environment was completed in June 2008. All network accounts are now managed within Microsoft Active Directory which has the ability to enforce password configuration and expiration standards. However, the Windows Directory and Network Services (WNDS) unit is still in the process of reviewing accounts and ensuring that the password configuration standards apply to all accounts. Currently, the AD environment settings differ from the CalPERS Information Security Identity Authentication Practice in the following areas:

Fiscal Year 2006/2007 Observation #15 (Continued)

Fiscal Year 2007/2008 Status (Continued):

Configuration	AD Settings	I.S. Identity Authentication Practice
Password length	6 characters	8 characters
Minimum password age	0	1 day
Password Complexity	not required	complex passwords required

The CalPERS WNDS Unit should continue work on ensuring that the AD environment properly enforces account passwords in accordance with the Information Security Identity Authentication Practice.

To implement the recommendation will require customer education and awareness. The level of effort is minimal for WNDS, however, the customer education/awareness needs to be coordinated with the Information Security Office, Enterprise Desktop Customer Support, Customer Support Center and WNDS. Implementation will be in the second quarter of calendar year 2009.

- 2. The prior year recommendation is in the process of being implemented. The CalPERS WNDS Unit has completed the transition from Novell Network to Microsoft Active Directory and is still in the process of establishing and configuring the Admins groups and developing the guidelines or policy to ensure that only a minimal amount of personnel are allowed access. Implementation is expected to be complete in the second quarter of calendar year 2009.
- 3. The prior year recommendation is in the process of being implemented. Due to financial considerations, the EIAM project has been postponed indefinitely as of the fourth quarter of calendar year 2008. Security Administration Services (SAS) is now going forward with a transition from Movaris to The Provisioning System (TPS), which was to be an interim replacement until EIAM was fully installed. The plans are now to enhance TPS with the functionality for a data owner approval process workflow. TPS is planned for initial implementation in February 2009, which will include data owner approval workflow for COMET. An enhancement to TPS, scheduled for June 2009, will incorporate data owner approval workflows for RIBS and CRS.

As no further development has been done on the Movaris application that would ensure data owner approval prior to granting access to applications or data, the ITSB should continue efforts to implement the TPS and ensure that the automated workflow for data owner approval functions appropriately and that current user accounts are reviewed by formal data owners to ensure that all accounts currently in use have the proper approvals.

Fiscal Year 2006/2007 Observation #15 (Continued)

Fiscal Year 2007/2008 Status (Continued):

- 4. The prior year recommendation is in the process of being implemented. The ISOF is in the process of implementing the Guardium SQL Guard appliance to monitor database access and activity. The original implementation date of June 2008 has been pushed back and the test phase of the implementation should now be completed by December 31, 2008. At that time, a decision to implement within the production environment will be made.
- 5. The prior year recommendation is in the process of being implemented. The ISOF is in the process of implementing the Guardium SQL Guard appliance to monitor database access and activity. The original implementation date of June 2008 has been pushed back to the end of fiscal year 2009. To date, no testing has been completed to test for database security assurance. The ISOF has begun the Guardium SQL Guard appliance implementation. The test phase should be completed by December 31, 2008. At that time, a decision to implement into the production environment will be made.

Fiscal Year 2008/2009 Status:

- 1. The prior year recommendation has been implemented.
- 2. The prior year recommendation has been implemented.
- 3. The recommendation continues to be in the process of being implemented. Due to financial considerations, the EIAM project has been postponed indefinitely as of the fourth quarter of calendar year 2008. Security Administration Services (SAS) has transitioned user access management workflow from Movaris to the User Access Request System (UARS), formerly The Provisioning System (TPS). To comply with the ISOF "Identity Authentication Practice", data owner approval functionality has been included in UARS for the COMET, RIBS and CRS applications.
 - SAS is currently working with the designated data owners of the COMET, RIBS and CRS applications to validate that all current system users have data owner authorizations for access. This is an ongoing effort and is expected to be complete by the end of calendar year 2009.
- 4. The recommendation continues to be in the process of being implemented. The Guardium SQL Guard appliance implementation in the production environment has been has been pushed back and is now scheduled to go live with the implementation of the new PSR system in April 2010. The device is currently being tested and configured within the test environment.

Fiscal Year 2006/2007 Observation #15 (Continued)

Fiscal Year 2008/2009 Status (Continued):

5. The recommendation continues to be in the process of being implemented. The Guardium SQL Guard appliance is scheduled to be implemented along with the new PSR system implementation scheduled for April 2010. The device is currently being tested and configured within the testing environment.

Fiscal Year 2009/2010 Status:

- 3. The prior year recommendation has been implemented.
- 4. This prior year recommendation continues to be in the process of being implemented. The User Access Team has reviewed the shared accounts with access to the VSAM files and the Oracle Schema Owner accounts and has received the necessary approvals as required by CalPERS policy. The Guardium SQL appliance that would monitor database access and activity, however, will not be implemented until PSR is active in September 2011.
- 5. This prior year recommendation continues to be in the process of being implemented. The Guardium SQL appliance has undergone testing and is planned for full implementation with PSR in September 2011. Until full implementation of the appliance, this recommendation will not be fully addressed.